UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

March 22, 2010

Mr. Ron Gatlin, Chief
Regulatory Branch
Nashville District
U.S. Army Corps of Engineers
3701 Bell Road
Nashville, Tennessee 37214-2260

Subject: Premium Coal Company – Area 19 (LRN-2004-00062)

Dear Mr. Gatlin:

The U.S. Environmental Protection Agency, Region 4, has completed its review of Premium Coal Company's proposed mining in Area 19 (LRN-2004-00062) in Anderson County, Tennessee. This review followed the Enhanced Coordination Procedures (ECP) for surface coal mining applications as detailed in the June 11, 2009, Memorandum of Understanding among the U.S. Department of Army, U.S. Department of Interior and the U.S. Environmental Protection Agency (EPA) Implementing the Interagency Action Plan on Appalachian Surface Coal Mining. The Area 19 project was placed on the final list of applications subject to the ECP on September 30, 2009, due to environmental concerns over the potential for further impact minimization, the adequacy of the compensatory mitigation, and the potential for downstream water quality impacts which could result from proposed mining and construction discharges.

The ECP process was started by the Nashville District on January 19, 2010, and concludes on March 22, 2010. Prior to and during the 60 day process, EPA has had extensive discussions with the Nashville District of the Army Corps of Engineers (Corps), the Tennessee Department of Environment and Conservation (TDEC), and the Knoxville field office of the Office of Surface Mining (OSM). The agencies and company representatives conducted a joint site visit on October 15, 2009, to confirm the mining plans and to discuss additional modifications that could be added to the proposed mining plan. EPA has reviewed the files of TDEC and OSM, as well as the permits for this project that have been issued by these agencies.

The site of this project was mined prior to the passage of the Surface Mining Control and Reclamation Act (SMCRA). In this project, the applicant proposes to re-mine the area utilizing contour and auger mining techniques. Premium Coal will mine through 2,850 linear feet of intermittent streams within the Ligias Fork watershed, with 92 acres of associated upland surface disturbance. Ligias Fork, the receiving water body for both Area 19 and the adjacent surface mine Area 18, is not a Tennessee 303(d) listed water body, and has a conductivity level of 373 μS/cm.

Pre-SMCRA un-reclaimed features on the site include mine pits, 80 foot highwalls and spoil piles. Some of these features are highly erodible and are sending significant quantities of soils and sediments downstream. In addition, five intermittent streams are currently flowing over the highwall, meandering along the abandoned mine bench, and eroding discharge channels in the spoil below the bench. Conductivities of the five intermittent streams range from 84 to 1080 *u*S/cm. No potentially acid/toxic forming materials and/or seeps have been observed. Old spoil left on-site for several years has shown no tendency to leach or otherwise contribute toxic/acid mine drainage based on monitoring in the watershed.

The applicant proposes to restore jurisdictional waters in the five intermittent streams by using natural stream design on-site concurrent with the mining and will remediate the existing condition by generating enough spoil material to recreate the approximate flow channel of the five intermittent streams. Mitigation will reestablish approximately 3,350 linear feet of intermittent streams on-site, restoring them to conditions similar to those which existed before pre-SMCRA mining within the watershed. In addition, the applicant will establish a 50-foot riparian buffer zone on all restored streams and around all avoided streams on the mine site. The proposed mitigation for streams combined with the highwall reclamation should provide an ecological lift to the Ligias Fork watershed through the reduction of erosion and potential sediment loads in downstream waters and it is expected that conductivity will remain below 500 *u*S/cm based on information derived from adjacent mining sites.

EPA believes that the proposed mitigation and mining plan to restore pre-SMCRA mining areas will result in an improvement of the Ligias Fork watershed. Reclamation of existing sources of water quality problems will provide an environmental benefit to the watershed. We have worked with your staff and TDEC staff to develop additional conditions to monitor the site and ensure that the project will result in environmental improvements to the aquatic ecosystems. With these conditions, we are satisfied that our concerns have been addressed. Therefore EPA supports the issuance of this permit by the Corps with the enclosed conditions.

I want to thank you and your staff for your cooperation and willingness to address our issues. If you have any questions, please call me at 404-562-9470 or Tom Welborn of my staff at 404-562-9354.

Sincerely,

James D. Giattina
Director
Water Protection Division

Enclosure

SPECIAL CONDITIONS FOR THE DEPARTMENT OF ARMY CLEAN WATER ACT SECTION 404 PERMIT ISSUED TO PREMIUM COAL COMPANY FOR THE CONSTRUCTION, OPERATION, AND RECLAMATION OF THE AREA #19 SURFACE COAL MINE IN ANDERSON COUNTY, TENNESSEE

Premium Coal Company is hereby authorized to discharge dredged and/or fill material into waters of the United States in conjunction with the construction of mine-through areas and sediment control structures associated with surface conveyances SC 1-5 in accordance with Department of Army Permit No. LRN-2004-00062. The mine-through of waters of the United States in conjunction with the re-construction of the five (5) unnamed tributaries (SC1-5) to Ligias Fork may proceed immediately upon receipt of this authorization, subject to the conditions herein. The Environmental Protection Agency (EPA) considers our concerns regarding avoidance and minimization issues to be generally addressed, however maintaining the physical, chemical, and biological integrity of the waters of the United States is of utmost importance, and the following special conditions are designed to minimize continued and further degradation of water quality in the Ligias Fork watershed.

Water Quality

I. The permittee shall submit, within 120 days of the effective date of the Section 404 permit, a Water Quality Standards Protection Plan (WQSPP), specific to the proposed mining activity that would be authorized by the Section 404 permit. The WQSPP shall include best management practices (BMPs) that will ensure that discharges from the mine's permitted outfalls do not cause or contribute to violations of Tennessee's water quality standards or cause or contribute to significant degradation of the waters of the United States. The specific content of the WQSPP should be tailored to conditions at the proposed mine.

Explanation: The Section 404(b) (1) Guidelines require that no discharge of dredged or fill material shall be permitted if it causes or contributes to violations of any applicable State water quality standard (40 C.F.R. 230.10(b)) or which will cause or contribute to significant degradation of the waters of the United States (40 C.F.R. 230.10(c)). Therefore, EPA is recommending that the applicant be required to develop and implement a Water Quality Standards Protection Plan and appropriate monitoring to ensure that significant degradation does not occur. EPA believes that to ensure consistency with the Guidelines the development of a WQSPP that includes BMPs to address pollutants that have the potential to cause or contribute to violations of Tennessee's water quality standards or which will cause or contribute to significant degradation of waters of the United States are appropriate for the Section 404 permit.

BMPs must be implemented prior to and during construction and operation. BMPs may include but are not limited to: topsoil management, utilization of silt fences, straw bales, check dams, limiting vegetation removal and bank shaping to the maximum extent practicable, mulching and seeding, leachate analysis of the soil profiles to determine the potential conductivity and selenium potential, appropriate relocation of potentially high conductivity or selenium soils and isolation of this material from

stormwater run-off so that it will not enter waters of the United States, multiple-in series sediment ponds, use of fill that will not result in increased conductivity or toxic levels of metals, the prohibition of the use or storage of toxic or hazardous materials where they could enter waters of the United States, and soil compaction of fill areas. All disturbed areas shall be seeded and mulched to minimize erosion as soon as possible. Appropriate stream bank protection measures should be installed in channel or on barren areas requiring erosion control, including but not limited to native grasses and forbs, vegetation, and other acceptable clean non-contaminated material.

II. In addition to monitoring requirements elsewhere in this Department of the Army permit, the permittee shall conduct chemical, physical and biological monitoring as indicated below immediately prior to the start of mining operations (to provide baseline data) and post initiation of mining operations at the frequencies described below.

a) In-stream Physical and Chemical Monitoring

1. Locations: In-stream sampling points shall include:

i. One sampling point on Ligias Fork approximately 200 feet down stream of the confluence of SC-5 in order to encompass the influence from all affected unnamed tributaries SC 1-5. This sampling point is denoted as SW-4/R on the Environmental Resources Map of October 2004 submitted by the permittee.

ii. One sampling point on each of the five unnamed tributaries below SC 1-5 approximately 200 feet above the confluence of each tributary with Ligias Fork.

2. Each water quality sample will be analyzed for:

Parameter	**Test Method**
Stream flow, cubic feet per second	
Specific conductance, uS/cm*	
TDS, mg/l	EPA Method 160.1
Total Suspended Solids	
pH, Standard Units	

*Specific conductance (SC) is a measurement of the sum of various ionic components in water that have the ability to conduct electricity. Due to differences in site-specific geology, the specific individual constituents comprising a SC (or TDS) concentration can vary. Relatively high levels of SC/TDS may impair the ability for some organisms to osmoregulate. Based on best professional judgment, the analyses for these parameters will be useful in determining the specific ionic species that may be the major constituent(s) in the conductivity level at the site.

3. Sample Type
   Samples shall be grab samples consisting of individual samples of at least 100 milliliters collected at a randomly selected time over a period not exceeding fifteen (15) minutes.

4. Sample Frequency
   Sampling shall begin at SW-4/R and the unnamed tributary below SC-5 upon issuance of this Section 404 permit. Monitoring at each of the unnamed tributaries below SC-1, SC-2, SC-3 and SC-4 shall begin prior to commencing mining activity that will contribute to each of those discharges, but no sooner than six (6) months prior to commencing contributing mining activity.

   Sampling frequency shall be monthly, at least five (5) days apart. Monitoring shall continue until reclamation is completed, all bonds are released and all compensatory mitigation sampling required by the TDEC Aquatic Resource Alteration Permit is completed.

   For each sampling event, the amount of precipitation during the previous 24-hour period shall be recorded.

5. Conditions for Taking Samples
   Samples shall be collected during low- or base-flow conditions (e.g., not during, or within 24 hours after, a precipitation event).

6. Test Methods
   All analyses shall be done using EPA methods in 40 C.F.R. Part 136.

7. Reporting
   Within 30 days of the receipt of the laboratory results, the permittee shall submit the laboratory report showing the analytical results and the latitude and longitude of the sampling locations, to the Tennessee Department of Environment and Conservation (TDEC), as part of the permittee's Discharge Monitoring Report; to the Office of Surface Mining (OSM), to the Nashville District Engineer; and to EPA.[1]

b) In-stream Biological Monitoring

[1] Reports shall be sent to the Tennessee Department of Environment and Conservation, Division of Water Pollution Control – Mining Section, 3711 Middlebrook Pike, Knoxville, Tennessee 37921-6538; Office of Surface Mining, Knoxville Field Office, 710 Locust Street, 2nd Floor, Knoxville, TN 37902; the District Engineer, Nashville District of the U.S. Army Corps of Engineers, 3701 Bell Road, Nashville, Tennessee 37214; and the EPA's Branch Chief of the Wetlands, Coastal, and Oceans Branch, U.S. Environmental Protection Agency, Region IV, 61 Forsyth Street South West, Atlanta, Georgia, 30303-8960.

1. Methods: Each in-stream biological sampling site shall be sampled for benthic macroinvertebrates following Tennessee Department of Environment and Conservation's Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys (QSSOP) dated October 2006 protocol for benthic macroinvertebrate sampling, (Protocol G), or EPA's Rapid Bioassessment Protocol Tier 4 methods (habitat, bugs, fish, and diatoms). Taxonomic resolution shall be at the genus-level. All samples will be taken during low- or base-flow conditions (e.g., not during or within 24 hours after a precipitation event).

2. Frequency: Biological sampling and habitat assessments shall be conducted semiannually concurrently with physical and chemical samples using the High Gradient Streams for Ecoregion 69d guidelines from January through June (spring), then again from July through December (fall) per the QSSOP Protocol D, avoiding recent drought conditions, or periods of scouring floods.

3. Concurrent in-stream monitoring
In-stream surveys and samples for SC, TDS, pH, temperature, and dissolved oxygen should be taken at the same locations along with benthic samples per the TDEC QSSOP Protocol E.

4. Sampling Locations
Same as In-stream Physical and Chemical Monitoring Locations described in II (a) (1) above.

5. Reporting
Reports shall provide a comparison between pre-mining conditions and post initiation of mining, including the other data analysis described in the Protocols K and L Data Reduction of Semi-Quantitative Samples and Report Preparation of the QSSOP. The report shall be provided within 90 days of the last data collected during each period, spring and fall. Reports shall be provided to TDEC, OSM, the Nashville Corps District Engineer, and to EPA.[2]

III. Remedial Actions

a) The effluent and in-stream biological physical and chemical monitoring before (i.e., baseline), during, and after active mining activities is required in order to evaluate the effectiveness of the BMPs and any downstream water quality effects as the mining proceeds. The permittee shall implement BMPs

[2] Reports shall be sent to the Tennessee Department of Environment and Conservation, Division of Water Pollution Control – Mining Section, 3711 Middlebrook Pike, Knoxville, Tennessee 37921-6538; Office of Surface Mining, Knoxville Field Office, 710 Locust Street, 2nd Floor, Knoxville, TN 37902; the District Engineer, Nashville District of the U.S. Army Corps of Engineers, 3701 Bell Road, Nashville, Tennessee 37214; and the EPA's Branch Chief of the Wetlands, Coastal, and Oceans Branch, U.S. Environmental Protection Agency, Region IV, 61 Forsyth Street South West, Atlanta, Georgia, 30303-8960.

practical to mine-through and remining of high walls, as identified in the WQSPP required under Section I..

c) Reporting: By the November following the third biological sampling season after completing construction of the first unnamed intermittent tributary to Ligias Fork (SC-1), the permittee shall provide a report to the TDEC, OSM, the Corps, and EPA that includes all sampling data available to date and discusses the impacts, if any, to the physical, chemical, and biological condition of Ligias Fork at each required monitoring location. The sampling results shall be analyzed comparing the results to the baseline values identified in Section III (a) above and any pertinent State numeric and/or narrative criteria that exist at the time of the last sample period. The report shall document each time a numeric value or threatened excursion occurred, the remedial action(s) taken, and how the remedial action(s) affected the monitoring results following the remedial action(s).

d) Should new information regarding the scope and/or proposed impacts to waters of the U. S. become available that was not submitted during review of the proposal, the permittee shall submit in writing such information and their proposed actions regarding this information to the Corps and EPA for review and evaluation, as soon as the new information is discovered.

f) As-built drawings for each stream reach, certified by a professional engineer, shall be furnished to EPA and the Corps offices within 60 days of completion of construction in that reach. Drawings must show the location and configuration, as well as all pertinent dimensions and elevations of each project component authorized under this Department of the Army Permit.

Compensatory Mitigation

I. Compensatory mitigation shall comply with the Mitigation Plan attached to this Section 404 permit, and the requirements of the TDEC Aquatic Resource Alteration Permit.